

REMARKS

A. Background

Claims 1-21 were pending in the application at the time of the Office Action. Claims 1-21 were rejected to as being anticipated by cited art. By this response applicant has amended claims 1, 2, 4, 5, 7-13, and 16. As such, claims 1-21 are presented for the Examiner's consideration in light of the following remarks.

B. Proposed Amendments

By this response, Applicant has amended claims 1, 2, 4, 5, 7-13, and 16 to further clarify, more clearly define, and/or broaden the claimed inventions to expedite receiving a notice of allowance. Support for these amendments may be found in the specification as originally filed. In view of the foregoing, Applicant respectfully submits that the amendments to the claims do not introduce new matter and entry thereof is respectfully requested.

C. Rejection on the Merits

1. Drawings

Paragraphs 1 and 2 of the Office Action object to the drawings as originally filed. Specifically, Figures 1-8 are objected to because the structural elements of the figures are merely labeled with identifying numbers without a suitable legend. Figure 1 is further objected to because it allegedly constitutes prior art and should be labeled as such. In response, Applicant has amended Figure 1 (as well as Figures 2 and 3) to now be labeled as prior art and Figures 1-8 to include identifying labels within the structural elements. In view of these drawing amendments, Applicant respectfully requests that the objections to the drawings be withdrawn.

2. Anticipation Rejection

Paragraphs 3 and 4 of the Office Action reject claims 1-21 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 6,433,904 to Swanson et al. (“*Swanson*”). Applicant respectfully traverses this rejection. Of these, claims 1, 4, 7, 10, 12, and 15 are independent claims.

Swanson discloses a wavelength division multiplexed optical communication link that uses forward error correction coding. In one embodiment, as shown in Figure 4 and cited by the Office Action, Swanson discloses using a demultiplexer 50 to inverse multiplex a channel so that the spectrum previously occupied by a single wavelength channel becomes occupied by a plurality of lower-power channels that collectively carry the information emanating from a single source 12b.” See col. 8, lines 48-65. Although demultiplexing input data is disclosed in Swanson, Applicant can find no discussion in Swanson of using any sort of differential signals, let alone transmitting differential signals of an input signal as separate optical signals.

As such, Applicant respectfully submits that Swanson does not disclose or suggest

- a transmission apparatus being configured to “convert differential signals of the input signal to separate optical signals to transmit to the optical transmission line,” as recited in amended claim 1; or
- a transmission apparatus having “M differential dividers for differentially dividing M input signals out of the plurality of input signals, respectively, and inputting the differentially divided signals into $2 \times M$ optical transmitters out of the (N+M) optical transmitters, respectively,” as recited in claim 4; or
- a transmission apparatus having “optical conversion means for converting differential signals of an input signal to separate optical signals,” as recited in claim 7; or

- a transmission apparatus having “M differential dividers for differentially dividing M input signals out of the plurality of input signals, respectively, and inputting the differentially divided signals into $2 \times M$ optical transmitters out of the (N+M) optical transmitters, respectively,” as recited in claim 10; or
- a receiving apparatus having “optical receiving means for receiving the optical signals; and optical conversion means for reproducing the differential signals from the optical signals,” as recited in claim 12; or
- a receiving apparatus having “M differential combiners, each differentially combining the output signals from two optical receivers receiving a pair of optical signals out of the (N+M) optical receivers, to output one signal,” as recited in claim 16.

Claims 2, 3, 5, 6, 8, 9, 11, 13, 14, and 16-21 variously depend from claims 1, 4, 7, 10, 12, and 15, and thus incorporate the limitations thereof. As such, applicant submits that claims 2, 3, 5, 6, 8, 9, 11, 13, 14, and 16-21 are distinguished over the cited art for at least the same reasons as discussed above with regard to claims 1, 4, 7, 10, 12, and 15. Accordingly, Applicant respectfully requests that the anticipation rejection with respect to claims 2, 3, 5, 6, 8, 9, 11, 13, 14, and 16-21 also be withdrawn.

D. Conclusion

Applicant notes that this response does not discuss every reason why the claims of the present application are distinguished over the cited art. Most notably, applicant submits that many if not all of the dependent claims are independently distinguishable over the cited art. Applicant has merely submitted those arguments which it considers sufficient to clearly distinguish the claims over the cited art.

In view of the foregoing, applicant respectfully requests the Examiner's reconsideration and allowance of claims 1-21 as amended and presented herein.

In the event there remains any impediment to allowance of the claims which could be clarified in a telephonic interview, the Examiner is respectfully requested to initiate such an interview with the undersigned.

Dated this 28th day of September 2006.

Respectfully submitted,

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